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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,910	10/15/2003	Yong-Chan Keh	5000-1-443	6253

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EXAMINER	
NGUYEN, TUAN N	

ART UNIT	PAPER NUMBER
2828	

DATE MAILED: 04/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

H·A

Office Action Summary	Application No.	Applicant(s)	
	10/685,910	KEH ET AL.	
	Examiner	Art Unit	
	Tuan N. Nguyen	2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication..
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 March 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *15-21* is/are allowed.

6)☒ Claim(s) *1-3,5,6 and 10-14* is/are rejected.

7)☒ Claim(s) *4,7-9,22 and 23* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. In responding to applicant's response filed 03/10/2006, claims 1, 4, 7, 9, 10, 12, 13 have been amended, claims 22, 23 have been added.

Claim Rejections - 35 USC § 102

2. The following is a quotation of 35 U.S.C. 102(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1, 10 are rejected under 35 U.S.C. 102(a) as being unpatentable over Yagi et al. (US 6868105).

With respect to claims 1, 10 Yagi et al. '105 shows and discloses an optical element module package (Fig 16) comprising; a laser diode (Fig 6: 5 LD) for projecting optical signals; a photo diode (Fig 6: 7 light receiving element, photodiode)(Col 15: 25-67) (Col 17:44-45) for monitoring the optical signals projected from the laser diode; a stem (Col 1: 40-45, stem 201) having a first through-hole formed in a long-hole shape that is parallel to the diametrical direction of the stem (ABSTRACT) (Fig 1a, 1c: surface through hole 1a, 1b along or parallel to the stem to be connected to the optical elements 4-7); and a plurality of leads arranged in a row (Fig 1a: 2g-2l plural through leads) and provided in the first through-hole, wherein the first through-hole is filled with a sealant of a glass material (Col 2: 15-20, seal the hole with glass process that suitable for mass production) so that the stem and the plurality of leads are held together. Since claim 10 recites the same or identical elements/limitations it is inherent to use

patents ('105) to recite the method of manufacturing an optical element module package, product by process.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or non-obviousness.

5. Claims 2-3, 5-6, 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yagi et al. (US 6868105) in view of Applicant's Prior Art (Fig 1,2).

With respect to claims 2, 11 the claim further require the stem has a heat sink block protruding from one end thereof, the heat sink block being adjacent to the first through-hole. Yagi et al. '105 discloses the above, however did not discreetly disclose about the heat sink adjacent to next through-hole. Applicant Prior Art (Fig 2) shows a laser device having heat sink block (Fig 2: 211) protruding from one end and adjacent to the first through hole (Fig 2: through hole formed from ceramic feed through and stem). It would have been obvious to one of

ordinary skill in the art to provide Yagi et al. '105 with the heat sink as taught or suggested by Applicant Prior Art (Fig 2), for the benefit of aligning the laser light to reduce heat generate within the device to extend the life of the laser device.

With respect to claims 3, 13 Applicant's Prior Art (Fig 1,2) shows a sub-mount attached to one end of the heat sink block (Fig 2: laser block on top of the sub-mount "not label or number" on top of the heat sink". Yagi et al. '105 further shows the sub-mount (Col 2: 21-25) (Col 4: 27-30 sub-mount) having a circuit pattern formed on a surface thereof (Fig 4, 5: 8 sub-mount with circuit wiring - the lead wires inherently need to be connected to the laser diode, photodiode, and other elements, now has been formed on the sub-mount to reduce clutter).

With respect to claims 5,6 Applicant's Prior Art (Fig 1: 102, 103, 104) shows and discloses the plurality of leads includes a DC bias lead for the laser diode, a radio-frequency signal lead, a lead for the monitoring photo diode, and at least one ground lead (Col 1: section [0006-0007] electrical RF signal, DC bias, cathode lead, diode, and corresponding leads).

With respect to claims 12, 14 the claims further require a step of sealing through-hole, wherein the sealant is melted at a temperature of about 500.degree. C. Yagi et al. ' 105 did not discretely disclose the range of temperature around 500 degree C, however Yagi et al. '105 did shows and discloses the lead have been aligned and fixed where sealing is heat to bond the elements together (Col 4: 13-45; Fig 1), and Applicant's Prior Art (Fig 1) (Col 1: section [0007]) further discloses the use of heat to bond the leads together with the stem. It has been held that where the

general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art, in this case is the range of melting the resin or glass to bond to the semiconductor and wiring. In re Aller, 105 USPQ 233.

REASON FOR ALLOWANCE

Allowable Subject Matter

6. The following is an examiner's statement of reasons for allowance - Applicant's response filed on 10/15/2003 has been considered, with respect to claim 15 the references of the record fail to teach or suggest:

Claim 15:

An optical element module package having a laser diode for projecting optical signals and a photo diode for monitoring the optical signals projected from the laser diode, comprising: a .stem having a first through-hole formed in a long-hole shape and a pair of second through-holes formed on the stem; and a radio-frequency lead provided in the first through-hole and a plurality of leads provided in the second through-holes.

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Allowable Subject Matter

8. Claims 4, 7, 22, 23 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The references of the record fail to teach or suggest:

Claim 4:

An optical module package having a laser diode, photodiode comprising a stem and wires formed in a long first through hole sealed with glass material, with a laser diode mounted on a sub-mount having a circuit form on the surface, where the stem has a heat sink block adjacent to the first through hole.

Claim 7:

The stem comprises a first through-hole located at one end of the stem, where a second pair of through hole extending through the stem from the other side having a pair of additional lead extending through the second pair of through hole, where the pair of second of through-holes, stem and additional lead are held together with glass material.

Claim 22, 23:

Where the submount contains a "V" shaped notch disposed at one end of the submount.

Response to Argument/

9. Applicant's remarks filed on 03/10/2006 have been fully considered but they are not persuasive. The examiner read the claims given their broadest reasonable interpretation consistent with the specification. However, it is not proper to read limitations appearing in the specification into the claim when these limitations are not recited in the claim. The claims 1, 10 are not patentable distinct from Yagi et al. (US 6868105). See *In re Paulsen*, 30 F.3d 1475,

1480, 31 USPQ2d 1671, 1674 (fed. Cir. 1994); *Intervet America Inc. v. Kee-Vet Lab. Inc.*, 887 F2d 1050, 1053, 12 USPQ2d 1474, 1476 (Fed. Cir. 1989).

On page 9, the applicant has argued "claims 1, 10 comprising a photodiode for monitoring the optical signals projected from the laser diode, in contrast Yagi reference discloses a signal-detecting light which does not monitor the optical signals". The examiner stand that the light-receiving element 7 is a photodiode receiving the optical beam from the laser as disclose on (Col 17: 44-45 the light receiving element 7 make possible to obtain light reception characteristics as designed). Applicant further argue that "the present invention relates to an optical element **module** which is a device supplying data to an optical communication network, while Yagi reference relates to different device which operate as a **component** use in CD-ROM device". The examiner read the claims given their broadest reasonable interpretation, and it is not proper to read limitations appearing in the specification into the claim when these limitations are not recited in the claim.

On page 10, applicant pointed out that the (Fig 6: #6) is not the photodiode but a mirror. Examiner admits that #6 was mistakenly inserted in the office action, instead of #7 stand for the signal-detecting light. However, column and lines which disclosed in the prior office action does clarify the existence of the signal-detecting light. The applicant further argue that "the light receiving element is positioned higher than the laser so that the light does not directly enter the light receiving element" and "the photodiode 304 detects the light emitted from the backside of the laser diode 303 **check** whether the laser diode function properly and perform APC". The examiner stands it is not proper to read limitations appearing in the specification into the claim when these limitations are not recited in the claim.

On page 11, again applicant pointed out that "Yagi fails to anticipate a photodiode which monitoring the optical signals projected from the laser diode". The examiner stand that the light-receiving element 7 is a photodiode receiving the optical beam from the laser as disclose on (Col 17: 44-45 the light receiving element 7 make possible to obtain light reception characteristics as designed)

Conclusion

10. The prior art made of record and relied upon is considered pertinent to applicant's discloses.

We et al. (US 5,974,066) and Blair et al. (US 6,795,461) disclose the use of photo-diode in monitoring the laser in opto-electric module. Murai (US 5252856) disclose plurality lead wires fixed through glass member through hole.

11. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP 706.07. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Communication Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan N Nguyen whose telephone number is (571) 272-1948. The examiner can normally be reached on M-F: 7:30 - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harvey Minsun can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tuan N. Nguyen

Tuan Nguyen

Art Unit 2828